REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested. Currently, claims 73-94 are pending. By this Amendment, independent claims 73 and 92 have been amended and new dependent claims 93-94 have been added.

Rejection under 35 U.S.C. §103:

Claims 73-92 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Smith (US '224) in view of Margulis et al (US '449, hereinafter "Margulis "). Applicant traverses this rejection.

The combination of Smith and Margulis fails to teach or suggest all of the claim limitations. For example, the combination of Smith and Margulis fails to teach or suggest "determining a local gap interval (Δt) to be imposed on traffic received by said respective network access point, the local gap interval being determined by scaling the global gap interval in dependence on the capacity of said respective network access point," as required by independent claim 72 and its dependents (including new dependent claim 93). Similar comments apply to independent claim 92 and new claim 94 which depends from claim 92.

Through the above quoted claim limitation (and other recited claim limitations), thc invention of claims 72 and 92 enable constraint of incoming traffic causing an overload to be implemented as quickly as possible from the occurrence of a sudden surge of traffic (e.g., caused by an event such as a popular TV program asking viewers to make a telephone call for a tele-

vote or to receive donations, etc.) to avoid normal traffic from being too adversely affected for too long a period.

Margulis does not emphasize speedy implementation of call constraining (i.e., call gapping). Margulis makes this clear by disclosing that two sampling cycles need to be completed before an access point will even send a message indicating that there might be an overload problem to a controller (see steps 100-110 in Figure 2A) which can only at that stage attempt to instigate call gapping throughout the network.

Margulis teaches "When the NP receives an MCE message relating to a *new* TN, it immediately broadcasts a gap control message to all switches on the network (FIG 3: blocks 150, 152). This gap control message specifies the TN and a standard initial call gap for the TN (emphasis added)" (see col. 5, lines 47-52 of Margulis). However, these explicitly disclosed steps cause the same gap to be applied to each switch *regardless of its capacity* (e.g., the number of incoming lines connected to it).

For subsequent rounds of constraining a Target Number (TN) (i.e., a not new TN or an old TN), the system of Margulis may perform more complicated processing in order to determine individual gap intervals which have been personalized for each possible individual switch. However, there is no teaching of each individual switch determining a local gap interval for itself by "by scaling the global gap interval in dependence on the capacity of" the switch along the lines as required by claim 72 or 92. Doing so would enable a customized local gap interval to be used at each switch/network access point, while also enabling a message to be sent to each

switch/network access point very quickly because the single global gap interval can be broadcast simultaneously to each switch/network access point.

Smith fails to resolve the above described deficiency of Margulis with respect to "determining a local gap interval (Δt) to be imposed on traffic received by said respective network access point, the local gap interval being determined by scaling the global gap interval in dependence on the capacity of said respective network access point," as claimed. Smith discloses that each source (access point) calculates its own (local) gap interval based on a received global constraint (the global admission factor C). However, this calculation also requires knowledge of the input transaction rate lambda which takes some time to calculate (it can only be adequately calculated once a plurality of appropriate call requests have been received).

The combination of Margulis and Smith therefore fails to teach or suggest broadcasting a global constraint (including a global gap interval) and then determining at each respective access point a local gap interval based on the global gap interval but scaled based on (e.g., in inverse proportion to) the capacity of the access point. Rather, both Smith and Margulis *teach away* from this feature: (i) Smith teaches determining a local gap interval based not on the capacity of the access point, but on the rate at which relevant calls are being received, which inevitably requires waiting until a number of such calls have been received in order to determine the rate at which they are arriving; and (ii) Margulis teaches calculating the local gap rate at the central controller and unicasting the result to the respective access point.

The claimed features of broadcasting a global constraint (including a global gap interval) and then determining at each respective access point a local gap interval based on the global gap interval but scaled based on the capacity of the access point enables a very fast response to an overload condition being detected -- especially when combined with the claimed initial local gap interval which is imposed before further traffic is received. For example, with a system as claimed, it is possible for the first X+1 calls (where X is a threshold number of calls per unit of time above which an overload condition is deemed to have occurred) to trigger call constraining and for the constraint to be implemented very shortly afterwards. As a specific example: if X = 100 calls, on receipt of the 101th relevant call attempt (possibly all arriving in parallel from different access points such that no access point has yet received more than one relevant call attempt) the controller would be able to identify that the threshold condition had been breached and immediately it would send a call gapping message including the global gap interval.

The access points can thus immediately determine a local gap interval based only on the capacity of the access point (e.g., the number of incoming lines to the access point) without having to await a first (in respect of access points which are not one of the first 101 access points to have received an appropriate call request) or a second (in respect of those 101 access points which have already received a first relevant call request) relevant call attempt. The access points can then immediately determine and apply an initial call gap such that some access points can even start blocking relevant calls even before they have even received a single one of such call attempts.

The above advantages of the present invention arc not possible in the hypothetical system resulting from the combination of Smith and Margulis. These advantages, in terms of the speed with which the system can start to control a "focussed surge which communications networks can expect to experience as tclevoting-type mass calling services gain popularity" (see page 12 lines 33-34 of the original specification), are not appreciated our obvious over the combination of Smith and Margulis.

Accordingly, Applicant respectfully requests that the abovc noted rejection under 35 U.S.C. §103 be withdrawn.

Conclusion:

Applicant believes that this entire application is in condition for allowance and respectfully rcquests a notice to this effect. If the Examiner has any questions or believes that an interview would further prosecution of this application, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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